

DISCUSSION OF THE AMENDMENT

A new Abstract replaces the previous Abstract, and is shorter and one paragraph.

Claim 17 has been amended by modifying formula (5), as supported in the specification at page 32, lines 9-13; by inserting that the molding base paper is prepared with a multi-layer combination former, as supported in the specification at page 18, lines 4-6; by inserting that the multi-layer paper has a low density layer sandwiched between high density layers, as supported in the specification at page 15, lines 19-22; by inserting that the multi-layer paper has a basis weight of 100 to 500 g/m² and a density of 0.40 to 0.70 g/cm³, and that the high density layer has a density of 0.7 to 0.9 g/cm³, as supported by original Claim 3; and by inserting that the density of the low density layer is 0.3 to 0.6 g/cm³, as supported in the specification at page 17, lines 4-5.

Claims 18, 21, 22 and 24 have been canceled.

Claim 19 has been amended to depend on Claim 17. Claim 23 has been amended to depend on Claim 19.

New Claim 25 has been added, as supported in the specification at page 19, lines 6-8.

No new matter is believed to have been added by the above amendment. Claims 17, 19, 20, 23 and 25 are now pending in the application.

REMARKS

The rejection of Claims 17-21 under 35 U.S.C. § 103(a) as unpatentable over US 4,775,560 (Katsura et al) in view of WO 00/14333 (Norlander et al), is respectfully traversed.

As recited in above-amended Claim 17, an embodiment of the present invention is process for preparing a molded paper vessel, comprising draw-molding under heat and pressure, a molding base paper having the following conditions (1) to (4):

- (1) a tensile strength (JIS-P 8113) of at least 2.0 kN/m,
- (2) an elongation at break (JIS-P 8113) of at least 1.5%,
- (3) a critical compression stress, defined by the following formula, in the range of 1 to 10 MPa:

$$\text{Critical compression stress} = A/B$$

wherein A represents the compression strength determined by JIS-P 8126, and B represents the area of loaded part of the test piece in the determination of the compression strength, and

- (4) an amount of compression deformation, caused by applying compression stress of 20 kgf/cm² in thickness direction, of at least 10%, so as to form a vessel which satisfies the following formula (5):

$$0.2 < H/(S1)^{1/2} \quad (5)$$

wherein S1 represents the bottom area of the vessel and H represents the height thereof,

wherein said molding base paper is prepared with a multi-layer combination former; is a multi-layer paper wherein a low density layer is sandwiched between high density layers; has a basis weight of 100 to 500 g/m² and a density of 0.40 to 0.70 g/cm³; and said high density layer has a density of 0.7 to 0.9 g/cm³ and said low density layer has a density of 0.3 to 0.6 g/cm³.

Katsura et al is drawn to a heat-resistant paper container and process for preparation thereof (column 1, lines 7-8). However, Katsura et al does not disclose the structure of their paper substrate, let alone a multi-layer paper prepared by a multi-layer combination former, as the present claims require. As Applicants are entitled to be their own lexicographer, it is understood that a multi-layer combination former provides separately forming and dehydrating layers on a wire, then combined in a wet state and then dried so that the low density layer is sandwiched between the high density layers, as is well-known in the paper making art, and as described in the specification beginning at page 18, line 9. The resultant multi-layer base paper is relatively not stiff and is easily elongated or molded. In addition, Katsura et al does not meet the limitation of present formula (5) of the claims. Even assuming the Examiner's calculation of 0.16 for $H/(S1)^{1/2}$ were correct, the present claims now require that this expression be greater than or equal to 0.2 .

Recognizing that Katsura et al does not disclose the properties of the molding base paper recited in Claim 17, the Examiner relies on Norlander et al. However, Norlander et al does not remedy the above-discussed deficiencies in Katsura et al.

Norlander et al relates to a paper or paperboard laminate composed of at least one bulk-promoting layer (bulk layer), and on at least one side thereof, at least a secondary layer, wherein the secondary and bulk layers are joined to one another directly or indirectly (page 1, lines 5-9). Norlander et al is concerned with providing a relatively stiff paperboard with reduced amount of material used, by reducing the density in a middle layer of the paperboard while the thickness of the resultant board is maintained (page 1, lines 11-13). See also the paragraph bridging pages 3 and 4. The bulk layer of Norlander et al consists of cellulose fibers with a freeness of 550-950 mlCSF. A binder is introduced into the bulk layer for maintaining the stiffness of the paperboard (page 3, lines 11-18). Thus, it is clear that the paperboard of Norlander et al is not obtained by drawing or molding under heat and pressure.

Thus, for this reason alone, even if Katsura et al and Norlander et al were combined, the result would not be the presently-claimed invention.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 17-20 and 22 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. With regard to the meanings of “JIS-P 8126” and “JIS-P 8113”, they refer to particular Japanese industrial standards, which are well-known in the art; English translations thereof are freely available. Indeed, English translations thereof were submitted with the response filed March 11, 2003 in the parent application, and are again **submitted herewith**. In addition, Claim 22 has been canceled. Accordingly, it is respectfully requested that this rejection be withdrawn.

The objection to Claim 21 is now moot in view of the cancellation of this claim. Accordingly, it is respectfully requested that the objection be withdrawn.

The objection to the Abstract of the Disclosure is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that the objection be withdrawn.

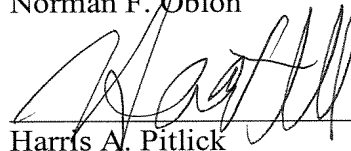
Applicants respectfully call the Examiner's attention to the omission of the Examiner's initials in the box corresponding to document FA on the copy of the Form PTO 1449 for the Information Disclosure Statement (IDS) filed April 5, 2004, attached to the Office Action. The Examiner is respectfully requested to initial the Form PTO 1449 submitted therewith, and include a copy thereof with the next Office communication. A copy of the page of the Form PTO 1449 listing document FA is **submitted herewith** for the Examiner's convenience.

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Reply to Office Action of July 6, 2007

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 251407US0DIV		SERIAL NO. NEW APPLICATION	
LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Yoshiyuki ASAYAMA, et al.			
				FILING DATE HEREWITH		GROUP	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO		
	DK	11-165725	06/22/99	JAPAN (with English Abstract)			X
	DL	11-240111	09/07/99	JAPAN (with English Abstract)			X
	DM	11-334715	12/07/99	JAPAN (with English Abstract)			X
	DN	2000-33927	02/02/2000	JAPAN (with English Abstract)			X
	DO	2000-203554	07/25/2000	JAPAN (with English Abstract)			X
	DP	2000-211045	08/02/2000	JAPAN (with English Abstract)			X
	DQ	2000-229619	08/22/2000	JAPAN (with English Abstract)			X
	DR	2000-238861	09/05/2000	JAPAN (with English Abstract)			X
	DS	3035868	01/16/97	JAPAN			X
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	DV	2604577	03/10/2000	JAPAN			X
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	DX	58-37771	08/26/83	JAPAN			X
	DY	61-14437	05/06/86	JAPAN			X
	DZ	4-317519	11/09/92	JAPAN (with English Abstract)			X
	EA	9-109600	04/28/97	JAPAN (with English Abstract)			X
	EB	6-298441	10/25/94	JAPAN (with English Abstract)			X
	EC	40-22268	10/02/65	JAPAN			
	ED	SE-B-389,145	02/03/77	SWEDEN (English Abstract Only)			
	EE	WO 00/14333	03/2000	NORLANDER, et al.			
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	FA	Asayama Yoshiyuki et al, "BULKY PAPER BOARD", Database WPI, Section Ch, Week 200132, Derwent Publications, AN 2001-304571 & JP 2001 073299 A, March 21, 2001					
	FB						
	FC						
	FD					<input type="checkbox"/> Additional References sheet(s) attached	
Examiner					Date Considered		
*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							